MDC-i4290C(CTD) User's Manual

Part 1

(Product Overview)

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1. Product Overview

1.1. MicroDigital®

MicroDigital® is a device which digitizes analog Video from CCD Camera as digital stream and transmits over Internet.

Users can monitor Video at any places in real time by MS Internet Explorer or Netscape Communicator without any additional software, if Internet access is possible.

1.2. MDC-i4290C(CTD)

MicroDigital® MDC-i4290C(CTD) is a stand-alone device transmitting Video from built-in Analog Camera over IP(Internet Protocol) Network.

It can transmit up to 30fps at 1920X1080 over the existing network such as LAN, leased line, DSL and Cable modem. You can monitor Video of MDC-i4290C(CTD) through either web browser(MS IE or Netscape Communicator), if MDC-i4290C(CTD) is connected to Network. MDC-i4290C(CTD) supports Video compression both Motion-JPEG and H.264 simultaneously so that user can choose appropriate Video compression for the purpose.

Picture 1 : MDC-i4290C(CTD)

1.3. Key Functions of MDC-i4290C(CTD)

- Built-In POE
- Standalone device built-in web server
- 10M/100M Auto Sensing Ethernet
- Configure and control device through Web browser
- Max 30 fps transmission speed on TCP/IP network
- Effective Bandwidth & Bit-rate Control (VBR/CBR) by H.264
- Supports Dual Stream (Motion JPEG & H.264)
- 1ch Voice Encoding / 1ch Voice Decoding
- Support Dynamic IP users by IPCCTVDNS server
- Support Various PTZ (Pan/Tilt/Zoom) Devices
- Support Sensor Input, Digital Output
- Support Transparent mode
- Built-in 2 way Audio transmission (1ch A-in, 1 A-out)
- Encryption function by user authentication
- Support Modem (Dial-in, Dial-out)
- Image transmission function via FTP, Email

1.4. Technical Specification of MDC-i4290C(CTD)

Model Name	MDC-i4290C(CTD)
Hardware	32bit Embedded CPU Flash 128Mbytes /SDRAM: 128Mbytes Linux version 2. 6.xx operating system Battery backed up real-time clock
Image sensor	1/3" Progressive 2.1 Megapixel CMOS
Lens	Megapixel Auto Iris
Minimum illumination	1 Lux(COLOR) / 0.5 Lux(B/W)
Video compression	Motion JPEG / H.264
Max Video Resolution	1920(H) X 1080(V)
Max Streaming Speed	1920(H) X1080(V) / 30(NTSC), 25(PAL) Frame per second
Video Streaming	Motion JPEG and H.264 Dual Streaming (Simultaneously) Controllable frame rate and bandwidth
Image setting	Compression levels: 6 (Motion JPEG) / 6 (H.264) Color: color, black & white
Voice	APCM 4bit IMA Sampling rates 8KHz Audio 1ch in & 1ch out
LAN interface	10/100BaseT Ethernet auto sensing
Alarm I/O Interface	1 Photo-coupled inputs and 1 Relay output
Audio Support	2way
Audio Comression	8Bit PCM, 8Khz, 8Kbyte / Sec
Audio In / Out	1 In / 1 Out
Video Output	1 loop through analog video outputs
Power Over Ethernet	Option
Serial Interface	One serial port for console, modem(PSTN & GSM), serial input/output device, PTZ CTL Port is RS-232, RS-485 Max Baudrate: 115200 bit/s
Security features	Multi user level protection for camera access, PTZ, Alarm I/O
Advanced Service	Up to 15.5M memory for Pre/Post alarm buffer e-mail, FTP, alarm Buffer by event or schedule IP notification, Alarm Notification to e-mail, CGI Call by event or schedule
Built-in Motion detections	Accuracy: 12x12=144 blocks Motion Sensitivity : -100 ~ 100 : 100 is hypersensitive
Others	Transmit Serial input data transfer with Video IP notification by e-mail
Management	Configurable by serial, web or telnet Remote system update via telnet, FTP OR web browser.
PWR Supply	SMPS input: 100~240VAC, 300mA Output: DC 12 V, 800mA Built-In POE
PWR Consumption	DC 12V 350 mA

Operating Environment	Temperature : 41° ~ 122°F (5° ~ 50°C) Humidity : 20 ~ 80% RH(non-condensing)
Users	16 simultaneous users
Installation, management and maintenance	Installation CD and web-based configuration Firmware upgrades over HTTP or FTP , firmware available at www.microdigital.co.kr
Video access from Web browser	Video access from Web browser
Minimum Web browsing requirements	Windows XP, 2000, NT4.0*, Internet Explorer 6.x or later Pentium4 2GHZ, 2G(RAM)
System integration support	Powerful API for software integration available at http://www.microdigital.co.kr, including Simple Viewer API, MicroDigital Control SDK, event trigger data in video stream, embedded scripting and access to serial port peripherals over HTTP/TCP User can be install user program daemon for event notification or sending image. Embedded operating system: Linux 2.6
Supported protocols	HTTP, TCP/IP, FTP, Telnet, RARP, PPP, PAP, CHAP, DHCP, SMTP client(e- mail), NTP, RTP/RTSP
Applications	MicroDigital CMS, MicroDigital NVR

Table 1 : MDC-i4290C(CTD) Specification

1.5. Packing List

MDC-i4290C(CTD)'s packing box includes the following items

MDC-i4290C(CTD)	1ea	
Power Supply Unit (Power Cable & SMPS DC12V 0.8A Adapter)	1ea	
Direct Cable	1ea	
CD (User's Manual, installation wizard and Pictures)	1ea	

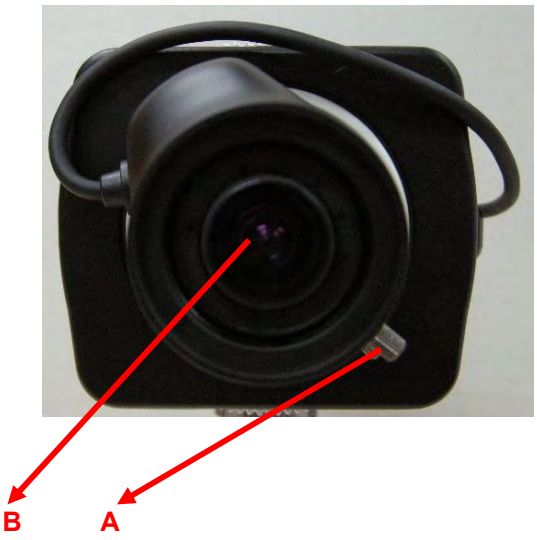
Table 2 : MDC-i4290C(CTD) Packing List

☞ *Please check all the listed items are included in your package. For any missing items, please contact your local distributor.*

2. Hardware Description

2.1. MDC-i4290C(CTD) Front Panel View

Picture 2 : MDC-i4290C(CTD) Front Panel

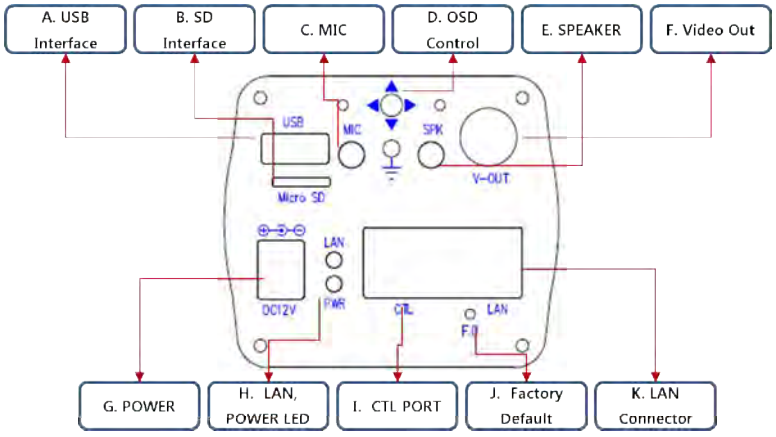


	Name	Description
A	LENS MOUNT RING	Adjustable hand-screw ring for LENS mount
B	LENS	C-MOUNT LENS, Only with Lens option separately sold. (IRIS LENS can be mounted)

Table 3 : MDC-i4290C(CTD) Front Panel Description

2.2. MDC-i4290C(CTD) Rear Panel View

Picture 3 : MDC-i4290C(CTD) Rear Panel View



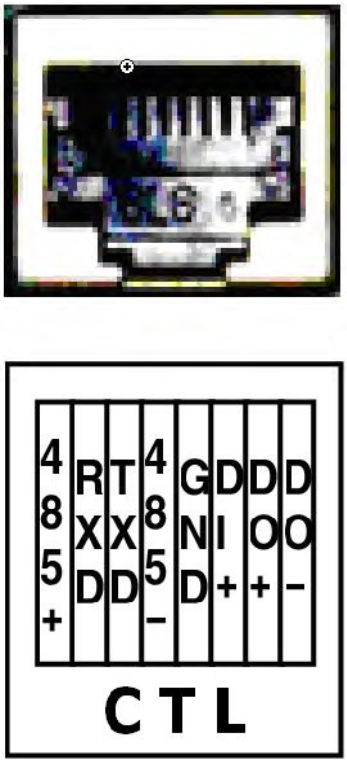
	Name	Description
A.	USB	USB Interface
B	SD	MicroSD Interface (Real-time recording & Playback using web browser)
C.	MIC.	1ch Audio Input Port
D.	OSD Control	OSD Control Key
E.	SPK	1ch Audio Output Port
F.	V-OUT	Video Out
G.	Power	12V DC Power Input port
H.	LAN, PWR	LAN : RED LED – LAN TX/RX(Light blinks when there is data transmission at the connected LAN. GREEN LED – LAN LINK(Light blinks when LAN is physically connected.) PWR : PRED LED - Light blinks when power is provided.) GREEN LED – Light blinks when IP setup is done.
I.	CTL	CTL Port (RS-485, RS-232, DI, DO)
J.	F.D (Factory Default)	This button can reset the factory default settings at the system. Especially when a user lost his/her admin-password, or when it got any uncertain faulty operation. - After reboot the system, wait until hearing two times of beep sound. - Keep pressing FD button for 5~10 seconds until hearing three times short beep sound. ACT LED blinks during the process. The system will reboot automatically when it's completed.
K.	LAN	LAN Connector

Table 4 : MDC-i4290C(CTD) Rear panel Description

2.2.1. CTL Port Description

The following is Pin-out information of CTL Port to connect PTZ or Sensor (DI/DO). Pin number starts from the left.

For RS-232 connection for Serial input device, Modem or Console (Hyperterminal.connection), RXD,TXD and GND are used. For connection to PC, RXD and TXD are used. RXD and TXD should be cross to communicate properly



Picture 4 : CTL Port Description

3. MDC-i4290C(CTD) HW installation and basic setup

3.1. Before installation

- Read carefully User's Manual
- Check User's Network (IP Address, Network Mask and default gateway)
- Secure IP address for MDC-i4290C(CTD)

3.2. Factory Default Condition

The following table shows the factory default condition. Please refer to this when you need to change the values on admin menu.

	Factory Default Condition
Admin ID	root
Admin password	root
IP address	10.20.30.40
Network mask	255.255.255.0
Gateway	10.20.30.1
Wireless LAN (Option)	Disabled

Table 5 : Factory Default Condition

☞ *Factory default Admin ID and Password are all lower case letters. You can change the password with Capital letters.*

3.3. MDC-i4290C(CTD) Hardware Installation

Following steps are the physical installation process for MDC-i4290C(CTD).

1. Connect cable to LAN port of MDC-i4290C(CTD).
2. Connect power cable and turn on power of MDC-i4290C(CTD) (Await until booting is finished)

After that, you need to follow the steps below.

- First, Network Configuration by MD-installer.
- Second, Camera Configuration by MD-installer or admin-menu.
- Third, Service Configuration by MD-installer or admin-menu.

You can configure most settings on Admin menu by Web Browser so you have to configure Network first.